perimenter who needs to apply statistical theory to his own work in regard to data analysis or design of experiments, the topics covered in this book are essential. It is well written, of high quality, and covers the topics very fully. However, it does not really introduce the reader to enough probability distribution theory to be read by someone who has no previous background in probability and statistics. The book by Box, Hunter and Hunter should be used as a second book, after first reading a book (or taking a course) on elementary probability and statistics.

In Part I, Chaps. 1–5, the ideas of significance tests and confidence intervals are introduced. Topics relating to the comparison of two experimental groups, e.g. treatment versus control group, are emphasized. Part II, Chaps. 6–8, deals with comparisons of more than two groups, the full analysis of variance. Part III, Chaps. 9–13, goes into more detail on the analysis of variance covering factorial designs of various kinds and their applications. Part IV, Chaps. 14–18, presents the various topics of regression analysis including a chapter on time series.

This book is well suited to self-learning as well as being a good textbook for a course. The exposition contains plenty of illustrative examples and there are many exercises and problems. The reader might be interested in comparing this book with others, also well written, on similar topics, such as *Probability and Statistics for Engineers and Scientists* by R. E. Walpole and R. H. Myers, or *Applied Linear Statistical Methods* by D. F. Morrison.

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Statistical Computation. J. H. Maindonald, John Wiley and Sons, New York, NY. 1984.

This provides an excellent introduction to the computational techniques which are currently being used for some of the most commonly utilized statistical procedures. A professional statistician, or student of statistics, who is not expert in numerical methods but who uses statistical packages for computing would find it well worth his while to study, read, or reference this high quality text in order to gain an intelligent insight into the proper use of packages. For those whose computing goes beyond packages, this book is invaluable.

Maindonald's book also appears as if it would be a good textbook for a course in numerical methods and analysis which is specifically designed for statistics students. The exposition is well organized, clearly stated, and contains many illustrative examples. There is a good set of references and each chapter ends with a set of exercises.

The first four chapters are devoted to linear regression and correlation topics along with their consequent matrix manipulations. Chapter 5 deals with analysis of variance and Chap. 6 with multivariate techniques. Chapter 7 covers various nonlinear topics such as maximum likelihood equations, nonlinear least squares and log linear models. Chapter 8 deals with splines, robust least squares, and certain topics in time series analysis. Chapter 9 gives an introduction to pseudorandom number generation and the last chapter, Chap. 10, provides information on some commonly used computer packages.

Most of the chapters are written in two parts, computational and theoretical. The computational part is explained from the point of view of a reader who is learning the material for the first time, and is presented in adequate detail with examples. However, the theoretical part, dealing with statistical theory itself, is sparsely stated, providing a good review for a graduate student in statistics, but probably unintelligible to one whose background in statistics is not strong. In addition, the reader must be comfortable with matrix notation and have some background in linear algebra.

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